

We claim as our invention:

1. A method comprising:

receiving data to be used as a packet template, said packet template including a plurality of static fields;

storing said packet template into a memory;

receiving an indication of an event to be reported;

generating a packet based on said stored packet template and said indication, said generated packet including non-static information; and

sending said generated packet to a communication controller for transmission over a shared medium.

2. The method of claim 1, further comprising:

calculating a partial checksum over said static fields of said packet template, wherein:

said receiving of said data includes said partial checksum, and

said storing of said packet template comprises storing said partial checksum in said memory, and

said generating said packet comprises calculating a complete checksum, said complete checksum being based on said partial checksum and said non-static information, said complete checksum being included as part of said generated packet.

3. The method of claim 1, wherein said generated packet includes an SNMP trap PDU.

4. The method of claim 2, wherein said generated packet includes an SNMP trap PDU.

5. The method according to claim 1, further comprising:  
polling at least one device over a bus;  
receiving a polling response from said at least one device; and  
generating said indication of said event to be reported based on said polling response.

6. The method of claim 4, wherein:  
said complete checksum is inserted into a UDP packet included in said generated packet.

7. The method of claim 6, wherein said complete checksum is based on information in said UDP packet and said SNMP trap PDU.

8. The method of claim 2, wherein said generating said packet further comprises:  
storing an event code and event data into said generated packet, said event code and said event data being based on said indication.

9. The method of claim 3, wherein said generating said packet further comprises:

storing an event code and event data into said generated packet, said event code and said event data being based on said indication.

10. The method of claim 1, further comprising:

maintaining a watchdog timer, an expiration of said watchdog timer causing said indication of an event for reporting.

11. A method comprising:

previously storing, into a memory, data to be used as a packet template, said packet template including a plurality of static fields;

receiving an indication of an event to be reported;

generating a packet, including non-static information, based on said previously stored packet template and said indication; and

sending said generated packet to a device for transmission over a shared medium.

12. The method of claim 11, wherein:

said storing of said packet template comprises storing a previously calculated partial checksum in said memory, and

said generating said packet comprises calculating a complete checksum, said complete checksum being based on said partial checksum and said non-static information, said complete checksum being included as part of said generated packet.

13. The method of claim 11, wherein said generated packet includes an SNMP trap PDU.

14. The method of claim 12, wherein said generated packet includes an SNMP trap PDU.

15. The method of claim 11, wherein said memory is NVRAM.

16. The method of claim 14, wherein:

said complete checksum is inserted into a UDP packet included in said generated packet.

17. The method of claim 16, wherein said complete checksum is based on information in said UDP packet and said SNMP trap PDU.

18. The method of claim 12, wherein said generating said packet further comprises:

storing an event code and event data into said generated packet, said event code and said event data being based on said indication.

19. The method of claim 13, wherein said generating said packet further comprises:

storing an event code and event data into said generated packet, said event code and said event data being based on said indication.

20. The method of 11, further comprising:

maintaining a watchdog timer, an expiration of said watchdog timer causing an indication of an event to be reported.

21. An integrated circuit, comprising:

a storage to store a packet template;

a packet generator to generate a packet based on the stored packet template and including information of an event, said packet generator being configured to send the packet to a communication device for communicating over the shared medium; and

an event processor to receive an indication of the event and inform the packet generator to generate the packet.

22. The integrated circuit of claim 21, wherein:

the packet template includes a partial checksum calculated over a plurality of static fields of the packet template,

said storage is configured to store the packet template and the partial checksum in a non-volatile storage, and

said packet generator comprises a complete checksum calculator for calculating a complete checksum, the complete checksum being based on the partial checksum and the information of the event, the complete checksum being included in the generated packet.

23. The integrated circuit of claim 21, wherein the generated packet includes an SNMP trap PDU.

24. The integrated circuit of claim 22, wherein the generated packet includes an SNMP trap PDU.

25. The integrated circuit of claim 21, wherein said storage stores the packet template in a RAM.

26. The integrated circuit of claim 24, wherein:  
said packet generator inserts the complete checksum into a UDP packet included in the generated packet.

27. The integrated circuit of claim 26, wherein said complete checksum is based on information in said UDP packet and said SNMP trap PDU.

28. The integrated circuit of claim 22, wherein said packet generator stores an event code and event data into the generated packet, the event code and the event data being based on the indication.

29. The integrated circuit of claim 21, further comprising:

a watchdog timer, an expiration of said watchdog timer causing the indication of an event.

30. A board for a computer, said board comprising:

a communication controller; and

an integrated circuit configured to communicate to a monitoring device through a second interface and to said communication controller through a first interface, wherein said integrated circuit comprises:

an event processor configured to receive an indication of an event;

a storage; and

a packet generator to receive the indication of the event and to generate a packet for reporting the event, the generated packet being based on a previously stored packet template stored in said storage, said packet generator being configured to send the generated packet to said communication controller through the first interface for transmission over a shared medium.